grandfathered short-spaced stations were permitted at least some flexibility in this regard by not being constrained by second adjacent channel and third adjacent channel protection criteria.

Lack of flexibility to move transmitter sites or make other changes in technical facilities is particularly a problem for those grandfathered stations whose transmitter sites are presently located inside the protected service contour of a second adjacent channel or third adjacent channel station. In such situations, the affected grandfathered short-spaced stations simply have no ability under present Commission Rules to file applications pursuant to the contour protection provisions of Section 73.215 of the Rules, and, accordingly, they can only decrease their coverage under the current version of Section 73.213(a).

Compass' Radio Station KXST(FM), Oceanside. California, is such a station. Its transmitter site is presently located within the protected 54 dBu contour of third adjacent channel Station KGB-FM, San Diego, California, and. correspondingly, the KGB-FM transmitter site is presently located within the protected 54 dBu contour of KXST(FM). However, as shown in the KXST(FM) modification application, <u>no</u> additional interference would result to KGB-FM from grant of the KXST(FM) modification application.

As shown in that application, there is a critical public interest need for the transmitter site relocation proposed in that application, since there is significant attenuation of the KXST(FM) signal in the southerly direction away from the station's present transmitter site due to the Double Peak, Mt. Whitney and Frank's Peak Mountain range, which obstructs signal delivery to the densely populated area south of the range, which is an integral part of the station's protected

54 dBu service area. The KXST(FM) modification application demonstrated that 907,000 persons within the KXST(FM) protected 54 dBu service contour are thus subject to shadowing as the result of such terrain obstructions. This accounts for approximately 47 percent of the entire population within the KXST(FM) 54 dBu protected contour. The KXST(FM) modification application demonstrates that the station was forced to rely upon no less than eight FM booster stations, all within KXST(FM)'s 54 dBu contour, in an attempt to overcome the effects of terrain shadowing to its audience, with less than satisfactory results, since co-channel interference to KXST(FM) by its own booster stations within the station's service area has resulted. In addition, the KXST(FM) modification application demonstrated that grant of the application would alleviate a significant amount of Receiver-Induced Third Order Intermodulation ("RITOI") interference presently received by KXST(FM) within its protected service area. Notwithstanding the clear public interest benefits that would accrue from grant of the KXST(FM) modification application, the present version of Section 73.213(a) of the Commission's Rules has essentially placed a roadblock in the path of any relocation of the station's transmitter site, notwithstanding a clear demonstration in the KXST(FM) modification application that no interference would be caused to KGB-FM and that, indeed, any existing interference to that station would actually be reduced. Clearly, a more flexible approach to these situations by the Commission is warranted in the public interest.

In this regard, the Commission itself has recognized that the southern California area is a very problematic place in which to provide FM broadcast service. The great geographic area involved, the extensive variety of topographic features and the disparate types of building

construction and places of habitat pose a great challenge to broadcasters seeking to provide a level and consistent standard of service to the public. The Commission recognized that "... the extremely rough terrain in the Los Angeles and San Francisco areas, as well as elsewhere [in California], would make operation with ... low power extremely unsatisfactory", and that "because of the great extent of the City of Los Angeles, a station operating with 50 kW and 500 feet antenna height in the exact center of the city could not comply [with the city grade service requirement]." Second Report, Memorandum Opinion and Order in Docket No. 14185, 40 FCC 720, 724 (1962).

The highly irregular terrain in the southern California area itself poses what is surely one of the greatest obstacles to FM reception. Within that area -- including the protected service area of KXST(FM) -- there are high mountains, foothills, bluffs, plateaus and moderate and deep valleys. The KXST(FM) modification application contains a showing as to certain of these terrain obstructions which block reliable service to virtually half of the population within KXST(FM)'s protected 54 dBu contour. Aside from the obvious outright obstructions which such terrain features impose on FM signal propagation and reception by those who happen to live, drive or work on the wrong side of these obstacles, they also contribute to the creation of widespread multipath interference.9

This multipath interference takes the form of distortion produced by the simultaneous reception of the FM signal over more than one path (i.e., the direct path from the station's FM transmitter plus the reradiated reflections of the station's signal off the terrain obstructions). Because the path links differ, the several signals reaching the radio receiver antenna are not in phase. Consequently, the net effect can be greatly varying signal strength, resulting in the so-called "picket fence" effect, or, if the relative phases are sufficiently close, signal distortion. In areas where multipath interference is

The Commission's proposed rule changes in this proceeding would give the licensees of second and third adjacent channel grandfathered short-spaced stations the needed flexibility to upgrade, modify or expand facilities in order to move their coverage areas in response to population movement and growth and in response to interference conditions which adversely affect a licensee's ability to serve its audience within its service area, particularly since, as shown below, no additional interference would be caused by such technical improvements by grandfathered short-spaced second and third adjacent channel FM stations. Thus, armed with the flexibility to adjust to changing conditions, such licensees will better be able to tailor their technical operations to the realities of their service areas and audience, thereby assuring better service to the public.

3. Conservation of Scarce Commission Resources

Adoption by the Commission of the proposal set forth in Paragraph 25 of its NPRM (i.e., a return to the pre-1987 practice of not considering second and third adjacent channel grandfathered short-spacings in the context of facilities improvement applications) would also result in what is likely to be a considerable savings of scarce Commission staff resources which have unfortunately been required since 1987 for the handling of facilities improvement applications involving grandfathered short-spaced second and third adjacent channel stations.

^{9 (...}continued)

encountered, both phenomena are to be expected. Difficulty in the reception of signals in shadowed areas of southern California is exacerbated by such multipath phenomena, and listening to KXST(FM)'s signal under such circumstances becomes virtually impossible in some places.

Compass' application (File No. BPH-910612ID) for modification of KXST(FM)'s technical facilities exemplifies a case in which Commission workload in connection with the processing of the application could have been dramatically decreased had the application been governed by the pre-1987 version of Section 73.213 Given the rule changes adopted by the Commission in 1987 in its Second Report and Order in MM Docket NO. 86-144, supra, 2 FCC Rcd 5693 (1987), the KXST(FM) modification application was required to show non-extension of the station's 1 mV/m contour in the direction of the 1 mV/m contour grandfathered shortspaced third adjacent channel Station KGB-FM. San Diego. California. Since such a showing could not be made, the modification application requested waiver of Section 73.213(a). Had the pre-1987 version of Section 73.213 governed the KXST(FM) modification application, no consideration would have been required as to third adjacent channel grandfathered short-spaced Station KGB-FM, and, accordingly, there would have been no legitimate basis for any opposition to the KXST(FM) modification application by the licensee of KGB-FM. However, given the 1987 revisions to Section 73.213, and given KGB-FM's unwillingness to consent to the KXST(FM) modification application, the licensee of KGB-FM filed an informal objection to the grant of the KXST(FM) modification application, as well as numerous other pleadings over the years. As noted above, Compass presently has pending before the Commission an Application For Review with respect to the Mass Media Bureau's denial of its waiver requests and the Bureau's dismissal of its modification application for KXST(FM). Unless the rules for grandfathered short-spaced second and third adjacent channel FM stations are liberalized in this proceeding, the Commission and its staff will, of necessity, have to resolve the contested issues posed in the Application For Review, which has now been opposed by the licensee of KGB-FM.

This unnecessary drain of scarce Commission resources in an era of budget trimming within the Federal government scarcely makes any sense when, as shown below, there is no risk of any increased interference that would result from adoption of the Commission's proposals for second and third adjacent channel grandfathered short-spaced FM stations.

The KXST(FM) situation is replicated in numerous other pending applications before the Commission. According to its July 1, 1996 Status Report of applications for construction permits to modify technical facilities of FM and AM full service stations and FM translator stations, at present there are at least 10 commercial FM stations which have pending before the Commission applications for modification of technical facilities which are presently listed as "blocked" from further processing because of the pendency of the instant rulemaking proceeding. Presumably, these applications could be processed, without regard to the proposed rule changes here under consideration by the Commission, but only at a considerable cost in terms of scarce Commission staff resources and time.

Clearly, adoption by the Commission of the proposals set forth in Paragraph 25 of its NPRM (i.e., a return to the pre-1987 rule of not considering grandfathered short-spaced second and third adjacent channel stations in processing facilities improvement applications for such stations) would yield the greatest degree of savings of Commission resources in processing grandfathered short-spaced second and third adjacent channel modification applications, since no staff time would be required to analyze the impact on other grandfathered short-spaced second and third adjacent stations. By contrast, under the alternative proposal set forth in Paragraph 26

of the Commission's NPRM, some additional staff time and resources would be required to analyze whether the transmitter site of a grandfathered short-spaced station is already within the protected service contour of a grandfathered short-spaced second or third adjacent channel station. This is, however, a rather minimal task for the Commission's staff, compared with the far more complex task of resolving contested proceedings involving grandfathered short-spaced second and third adjacent channel stations seeking to improve technical facilities.

For these reasons, Compass endorses the proposal set forth in Paragraph 25 of the Commission's NPRM and urges its expeditious adoption by the Commission so as to bring Section 73.213 of the Rules back to its pre-1987 form. However, in the unlikely event that the Commission were to decline to adopt the proposal in Paragraph 25 of the NPRM, Compass urges the Commission to adopt, as an alternative, the proposal set forth in Paragraph 26 of the NPRM with respect to grandfathered short-spaced second and third adjacent channel FM stations.

In sum, significant public interest benefits will flow from adoption by the Commission of its proposal for modifications to Section 73.213 of the Rules for grandfathered short-spaced second and third adjacent channel stations. As shown below, these rule changes will not result in any risk of increased interference to grandfathered short-spaced second and third adjacent channel stations.

B. Adoption by the Commission of Its Proposals To Liberalize
Section 73.213 of the Rules For Grandfathered Short-Spaced
Second and Third Adjacent Stations Will Not Result In Increased
Interference To Such Stations

As shown above, in its Fourth Report and Order in Docket No. 14185, 40 FCC 868 (1964), the Commission noted findings which indicated that second adjacent channel and third adjacent channel interference may be disregarded in the context of facilities improvement applications because such interference is usually very small in amount and usually occurs only around the transmitter site of the station causing the interference. Id. at 879. The Commission's NPRM reaffirms these findings. NPRM, ¶24, slip op at 10. Furthermore, the Commission noted in its NPRM in this proceeding that any such interference is actually a substitution of service in that very small interference area in the immediate vicinity of the transmitter site of the station seeking to improve facilities. NPRM, ¶24, slip op. at 10. In addition, the Commission noted in its NPRM that:

"For grandfathered stations, on an overall basis, creating these small areas of potential interference to some receivers is more than outweighed by enhancing the ability of existing stations to modify and improve service in response to changing conditions"

Id. at ¶24.

More significantly, the Commission stated as follows in its NPRM:

"A limited number of grandfathered stations existed between 1964 and 1987 with complete flexibility on second adjacent channel and third adjacent channel short-spacings and we did not receive complaints of second-adjacent-channel or third-adjacent-channel interference during that time. Thus, historically, the absence of restrictions did not result in interference complaints, and we are therefore inclined to reinstate the pre-1987 provisions. [Emphasis added.]"

<u>NPRM</u> at ¶24, slip op. at 10.

The fact that the Commission did not receive any complaints of any second adjacent or third adjacent channel interference from grandfathered short-spaced stations which improved

their technical facialities between 1964 and 1987 is significant evidence of the fact that such interference did not exist. As shown below, this conclusion is further bolstered by other emperical data, and the Commission itself has recognized over the years that second adjacent channel and third adjacent channel stations pose little risk of interference to one another.

In <u>Santa Monica Broadcasting</u>, Inc., ___ FCC Red ___ 53 RR 2d 324 (1983), the Commission held that determinations of interference <u>yel non</u> with respect to <u>commerical</u> FM stations are to be based on the interference ratios embodied in Section 73.509 of the Commission's Rules. <u>Id</u>. at 325. Section 73.509 of the Commission's Rules specifically embodies specified ratios of undesired-to-desired signal strength as determinants of the onset of interference. More particularly, for third adjacent channel stations, Section 73.509(a) of the Commission's Rules establishes a 40 dB ratio of undesired to desired signal strength as the benchmark for the onset of interference. This standard has also been embodied in Section 73.215(a)(2) of the Commission's Rules with respect to contour protection for commercial FM broadcast stations. <u>See</u> Section 73.215(a) of the Commission's Rules; <u>Report and Order in MM</u>

Santa Monica Broadcasting, Inc., supra, 53 RR 2d 324, 325 (1983).

It is significant to note that the Commission has held that, because grandfathered short-spaced stations seeking improvement of technical facilities may already be causing interference to other short-spaced stations, it is appropriate to determine the degree of interference already encountered with regard to the existing operations of the station to be improved, and then to determine whether there will be any increase in that interference. In this connection, the Commission has held as follows:

[&]quot;Objectionable interference,' ... will be defined as any increase in the interference presently encountered within the station's 1 mV/m contour, which is neither masked by existing interference nor is so small as to be <u>de minimis</u>."

Docket No. 87-121, 4 FCC Rcd 1681 (1989), reconsideration granted in part and denied in part, Memorandum Opinion and Order in MM Docket No. 87-121, 6 FCC Rcd 5356, 5362 and 5365 (1991).

The "ratio method" for predicting interference by an undesired signal to a desired signal is thus at the heart of the Commission's interference rules. This method postulates that interference will occur where the undesired signal exceeds the desired signal level by a specific ratio, and that specific ratio will vary depending on the frequency separations of the stations in question.

The Commission has recognized that the onset of interference to an FM station removed in frequency by three channels from another FM station (third adjacent channel stations) is at the point where the undesired station's signal strength is at least 40 dB greater than the signal strength of the desired station. See Section 73.215(a)(2) of the Commission's Rules; Report and Order in MM Docket No. 87-121, 4 FCC Rcd 1681 (1989), reconsideration granted in part and denied in part, Memorandum Opinion and Order in MM Docket No. 87-121, 6 FCC Rcd 5356, 5365 (1991). Stated in linear terms rather than in logarithmic terms of decibels, under the 40 dB standard, the undesired station's signal strength must be 100 times greater than the desired station's signal strength before any third adjacent channel interference is to be expected.

The pending KXST(FM) modification application (File No. BPH-910612ID) contains a showing that, as the transmitter site of the grandfathered short-spaced FM station is moved closer

to the transmitter site of a third adjacent channel grandfathered short-spaced station, a reduced interference area results because of the increase in the signal strength of the desired (protected) station. The KXST(FM) application demonstrates that, when the higher signal strength of the desired (protected) third adjacent channel grandfathered short-spaced station is considered along with the 40 dB ratio for determining the onset of interference to the protected station from the station seeking to improve facilities, the signal strength required for such interference to occur also increases, and such a higher interfering signal would occur only in close proximity to the transmitter site of the interfering station (i.e., the station seeking to improve facilities).

The Commission itself has recognized, with respect to second and third adjacent channels, interference is usually reduced as the transmitter sites of the two second or third adjacent channel stations are brought closer together.

"[W]e will permit stations to disregard short-spaced stations on second and third adjacent channels in making requests for increased feacilities. ... [T]he interference usually is smaller the closer the stations are together. [Emphasis added.]"

Fourth Report and Order in Docket No. 14185, 40 FCC 868, 879 (1964).

There is even less concern today that second and third adjacent channel interference will exist than there was in 1964 when the Commission adopted its Fourth Report and Order in 14185. Over the 32 years since 1964, there have been dramatic improvements in radio receiver design, particularly in the area of enhanced selectivity. This results in the ability of a radio receiver to "lock on" to a desired station's signal and reject second and third adjacent channel interference.

Empirical data support the foregoing conclusions—Annexed hereto as Exhibit 1 is the Technical Statement of Louis R. du Treil, Sr., of the consulting enginerring firm of du Treil, Lundin & Rackley, Inc., consultants to Compass—Mr. du Treil therein notes a number of real-world circumstances in which second and third adjacent channel FM stations have operated in very close proximity to one another (transmitter site to transmitter site) without any evidence of any interference being caused by one station to the other. The empirical data are summarized below:

1. Memphis, Tennessee

As is noted by Mr. du Treil in his annexed Technical Statement, in Memphis, Tennessee, two noncommercial FM stations -- WUMR(FM) (formerly WSMS) on FM Channel 219 and WKNO-FM on Channel 216 -- received experimental authorizations from the Commission in 1989 to operate with transmitter sites located only 3.3 km apart from one another, even though they operated on third adjacent channel FM stations. See File Nos. BPEX-881128ME and BPEX-881128MF. Mr. du Treil notes that the normal separation for these two stations under the Commission's Rules would be 79 km. Radio Station WUMR(FM) operated with an effective radiated power of 25 kW with an antenna height of 120 meters above average terrain. WKNO-FM, operated with an effective radiated power of 100 kW at an antenna height of 174 meters above average terrain. After testing with the experimental facilities described above, the experimental results demonstrated that no interference occurred, notwithstanding the close proximity of the stations' transmitter sites. Based on these results, both WUMR(FM) and WKNO-FM were granted licenses by the Commission to operate with the facilities described above. As is noted by Mr. du Treil in his Technical Statement, the Chief Engineer for

WUMR(FM) has advised that there have been no complaints of interference by either of the stations to one another since the time that WUMR(FM) and WKNO-FM began operating with transmitter sites located only 3.3 km apart from one another

2. Miami, Florida

As shown in Mr. du Treil's annexed Technical statement, since May 1994, the State of Florida has operated an experimental FM station in Dade County in the City of Miami. (See File No. BPEX-930513MA.) The station was assigned the call sign WAEM and operates on FM Channel 272 with an effective radiated power of 25 Watts and with an antenna height of 100 meters above average terrain. The station's transmitter site is located only 20.4 km away from the transmitter site of second adjacent channel Station WMXJ(FM), Pompano Beach, Florida, which operates on Channel 274C with an effective radiated power of 100 kW and with an antenna height of 307 meters above average terrain. As noted by Mr. du Treil in his annexed Technical Statement, tests performed by Kessler and Gehman Associates, Inc., demonstrated that no interference was caused by the operation of WAEM(FM) to the operation of WMXJ(FM). notwithstanding the close proximity of the respective transmitter sites of the two second adjacent channel stations.

3. Greenville, South Carolina

As noted by Mr. du Treil in his annexed Technical Statement, another example of two significantly short-spaced channel FM stations which coexist without causing interference to one another is that of Radio Stations WFBC(FM), Greenville. South Carolina, and WFNQ(FM), Forest City, North Carolina. As shown by Mr. du Treil, the respective transmitter sites of these

two stations are separated by a distance of only 38.3 km, even though the required separation under the Commission's Rules is 105 km. Mr. du Treil notes that WFBC(FM) operates on Channel 229C with an effective radiated power of 100 kW and with an antenna height of 564 meters above average terrain. WFNQ(FM) operates with an effective radiated power of 93 kW and an antenna height of 619 meters above average terrain. Mr. du Treil notes that there are no known complaints of interference caused or received by these stations to one another.

4. Washington, D.C.

Radio Station WHFS(FM), Annapolis, Maryland, operates on Channel 256B. Radio Station WMZQ-FM, Washington, D.C., operates on Channel 254B. As is noted in Mr. du Treil's annexed Technical Statement, WHFS(FM)'s transmitter site is presently 25.3 km short-spaced with respect to the transmitter site of second adjacent channel Station WMZQ-FM. Mr. du Treil further notes that the WHFS(FM) transmitter site is also 35.0 km short-spaced with respect to second adjacent channel Station WGAY(FM), operating on Channel 258B in Washington, D.C. As is shown in Mr. du Treil's Technical Statement, the required separation for such Class B FM stations operating on second adjacent channels with respect to another is 74 km. Nonetheless, Mr. du Treil notes that there are no known complaints of interference resulting from these short-spacings.

5. Tijuana, Mexico

Radio Station XHKY(FM), Tijuana, Mexico, operates on the frequency 99.3 MHz (i.e., on Channel 257B1). According to Mr. du Treil's annexed Technical Statement, the transmitter site of XHKY(FM) is located only 3.8 km away from the transmitter site of second adjacent channel FM Station XHMORE(FM), which operates on Channel 255B (i.e., on the frequency

98.9 MHz) in Tijuana, Mexico. Mr. du Treil notes in his Technical Statement that, if these two stations were operating under applicable Commission Rules, the required minimum separation between their respective transmitter sites would be 105 km.

In addition, Mr. du Treil notes that the transmitter site of XHKY(FM) is located only 30.9 km from that of second adjacent channel Class B1 Station XHBCN(FM), operating on Channel 259B1 (i.e., on the frequency 99.7 MHz) in Tijuana. Mr. du Treil notes in his Technical Statement that, under applicable Commission Rules, the minimum required separation for two second adjacent channel Class B1 stations is 50 km

Annexed hereto as Exhibit 2 is the Declaration of Victor M. Diaz, a principal of the licensee of Radio Station XHKY(FM). Mr. Diaz therein states that, even though XHKY(FM) has operated for almost three years at dramatically reduced mileage separations from the transmitter sites of second adjacent channel FM stations on either side of XHKY(FM)'s frequency, and even though one of these stations has its transmitter site located only 3.8 km away from XHKY(FM)'s transmitter site, nonetheless, in the past three years of operation in this fashion, there have been no instances of interference or complaints of interference by either XHBCN(FM) or XHMORE(FM) to XHKY(FM), or, to Mr. Diaz' knowledge, from XHKY(FM) to either XHBCN(FM) or to XHMORE(FM). To the contrary, Mr. Diaz affirms that the latter three stations have coexisted harmoniously in Tijuana without any indications of interference.

Mr. du Treil also notes other instances of significant short-spacing on adjacent channel stations in Tijuana in his annexed Technical Statement—Specifically, the respective transmitter sites of third adjacent channel FM Stations XETRA(FM). Tijuana (operating on Channel 216C on the frequency 91.1 MHz) and XHTIM(FM) (operating on Channel 219B on the frequency 91.7 MHz) are located only 4.3 km apart from one another—If these two stations were operating under Commission Rules, the minimum required mileage separation between the two stations, according to Mr. du Treil, would be 105 km.—Similarly, Mr. du Treil notes that the respective transmitter sites of third adjacent channel FM Stations XHRBN(FM), Tijuana (operating on Channel 252A, on the frequency 98.3 MHz) and XHMORE(FM), Tijuana (operating on Channel 255B, on the frequency 98.9 MHz) are located only 5.2 km apart from one another. Presumably, these third adjacent channel stations are able to coexist with such significant short-spacings without any indications of interference by one station to another.

In sum, all available evidence demonstrates clearly that no interference is caused by short-spaced second and third adjacent channel stations to other such stations. To the contrary, as shown above and in the pending KXST(FM) modification application, the closer that two such stations move their respective transmitter sites toward one another, the less the stations experience any interference from one another. Under these circumstances, there is simply no rational basis whatsoever for the Commission to continue to adhere to the inflexible regulatory regime established under the present version of Section 73 213 of the Rules with respect to grandfathered second and third adjacent channel stations. To the contrary, in light of all the significant public interests benefits which would flow from adoption by the Commission of the

proposals set forth in Paragraphs 25 and 26 of its <u>NPRM</u> in this proceeding, the Commission should expeditiously revise Section 73.213(a) in accordance with the proposal set forth in Paragraph 25 of the <u>NPRM</u>, or, alternatively, in accord with the proposal set forth in Paragraph 26 of that document.

V. The Commission Should Eliminate Its Policy On Agreements By Grandfathered Short-Spaced Stations

Under the present version of Section 73 213(a) of the Commission's Rules, a grandfathered short-spaced station may have technical facilities modified or relocated provided that the 1 mV/m field strength contour of that station is not extended toward the 1 mV/m field strength contour of any other short-spaced station. Nonetheless, under Section 73.213(a), the Commission will consider on an <u>ad hoc</u> basis, increases in the technical facilities of a grandfathered short-spaced FM station, despite a 1 mV/m contour extension, where an agreement exists between the two stations contemplating improvements in the technical facilities of each of the stations, and where an appropriate public interest showing is made. <u>See Policy With Respect To Agreement Between Short-Spaced FM Stations</u>. 57 FCC 2d 1263 (1975). As noted by the Commission in Paragraph 29 of its <u>NPRM</u> herein, since 1987, these policies have covered second adjacent channel and third adjacent channel short-spacing situations.

Compass supports the Commission's proposal, in Paragraph 30 of its NPRM, to eliminate the need for grandfathered short-spaced stations to obtain an agreement with other grandfathered short-spaced stations as a condition precedent to grant of a modification application. As noted above, if the Commission's Proposal 1 and Proposal 2 in its NPRM were adopted, grandfathered

short-spaced stations would have a much greater degree of flexibility in choosing new transmitter locations, or in improving technical facilities, without the need for such an agreement.

Moreover, under the Commission's proposals in its NPRM, interference and public interest considerations would be the determining factors in granting modification applications.

In point of fact, the present Commission policy on mutual facilities improvement agreements among grandfathered short-spaced stations has essentially given a powerful tool to some licensees with which to block facilities improvement by a grandfathered short-spaced adjacent channel station, for competitive or other private pecumiary reasons. It is arbitrary and capricious for the Commission to essentially delegate ultimate veto power over facilities improvement applications or transmitter site relocation applications to private parties who are the licensees of adjacent channel stations and who have a direct and immediate competitive interest in denying consent so as to frustrate the grant of such modification applications.

Furthermore, it should be noted that, in many cases, the grandfathered short-spaced station which is being asked to consent by entering into a mutual facilities improvement agreement already operates with maximum technical facilities for its class of station and is therfore not in a position to further improve those facilities. Hence, it is simply not possible for such stations to enter into a mutual facilities improvement agreement with another grandfathered short-spaced adjacent channel station seeking to modify facilities, since the station has nothing that can be improved.

Accordingly, Compass supports the Commission's proposal to eliminate the need for reliance on agreements among grandfathered short-spaced stations, particularly with respect to grandfathered short-spaced second adjacent channel stations and third adjacent channel stations. However, Compass respectfully urges the Commission to clarify that its interference concerns, as articulated in Paragraph 30 of its NPRM, are only applicable to modification applications involving grandfathered short-spaced co-channel and first adjacent channel stations. As shown above, there are no such concerns with respect to modification applications for grandfathered short-spaced second adjacent channel and third adjacent channel stations.

VI. Conclusion

In this proceeding, the Commission has a unique opportunity to restore balance and flexibility in its regulatory regime with respect to processing of modification applications for grandfathered short-spaced stations whose licensees find it necessary to relocate or improve technical facilities in light of changing circumstances. By adopting the proposals in its NPRM with respect to second adjacent channel and third adjacent channel grandfathered short-spaced stations, the Commission will be providing greater flexibility for such stations to meet the challenges posed by operating in today's highly competitive and increasingly consolidated radio environment and for such stations to better serve their audiences. Correspondingly, scarce Commission resources can be conserved by adoption of the Commission's proposals. Importantly, adoption of those proposals with respect to second and third adjacent channel grandfathered short-spaced stations will not result in increased interference to any station.

For the reasons set forth above, the Commission should liberalize Section 73.213(a) with respect to grandfathered short-spaced second adjacent channel and third adjacent channel stations in the manner proposed in Paragraph 25 of its NPRM in this proceeding. Alternatively, the Commission should modify Section 73.213(a) for such second adjacent channel and third adjacent channel grandfathered short-spaced stations in the manner proposed in Paragraph 26 of the NPRM. In addition, the Commission should adopt its proposal, in Paragraph 30 of its NPRM, to no longer require grandfathered short-spaced second adjacent and third adjacent channel stations seeking relocation of or improvement in technical facilities to obtain a mutual facilities improvement agreement with other such stations. As shown above, adoption of these proposals will result in significant public interest benefits, while not posing any risk of any additional interference to grandfathered short-spaced stations.

Respectfully submitted,

COMPASS RADIO OF SAN DIEGO, INC.

Ву:_

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July 22, 1996

TECHNICAL STATEMENT IN SUPPORT OF COMMENTS OF COMPASS RADIO, INC. MM DOCKET NO. 96-120

This technical statement has been prepared on behalf of Compass Radio, Inc. ("Compass"), licensee of FM broadcast station KXST (formerly KIOZ) Oceanside, California. Prior to April 1996, station KXST was licensed to Par Broadcasting Company, a California General Partnership.

Compass supports the Commission's proposal in the Notice of Proposed Rule Making ("NPRM"), in the matter of Grandfathered Short-Spaced FM Stations, MM Docket No. 96-120, RM-7651. The Commission outlines three proposals in the NPRM in paragraph 8 of the document. Compass supports Proposals 2 and 3, which relate to the elimination the second and third-adjacent channel spacing requirements for pre-1964 grandfathered short-spaced stations and the need to obtain agreements by the short-spaced stations.

Throughout these comments, "grandfathered station" refers only to those FM stations at locations

Page 2 Oceanside, California

authorized prior to November 16, 1964, that did not meet the separation distances required by the later adopted Section 73.207 of the FCC rules, and have remained shortspaced since that time.

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Separation Requirements For Stations Separated By 2 Or 3 Channels.

The Commissions rules require distance separation between stations operating on channels which are second or third adjacent to one another. The separation varies by station class as tabulated in 73.207(b)(1) of the rules. These separations were established with the advent of FM broadcasting and have remained essentially unchanged since then. For the commercial channels (Channels 221 through 300) the desired to undesired signal ratio is 40 dB for both second and third adjacent channels. (The non-commercial educational band employs a 20 dB ratio for second adjacent channel stations). In terms of signal strength contours, the protected contour, (54 dBu for Class B stations, 57 dBu for Class B1 stations and 60 dBu for any other class of station) must not be overlapped by an interfering signal strength contour which is 40 dB higher. In establishing this D/U ratio, it was assumed that the interfering station was located outside of the protected contour.

A Subsidiary of A.D. Ring, P.A.

Page 3 Oceanside, California

Because of the way the FM band developed, with channels initially allotted based on a table, then allotted on the basis of contour protection and finally, back to the initial allottment method of a table, some stations on second and third adjacent channels have transmitter sites within the protected contour of the second or third adjacent channel station.

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The predicted interfering area between second and third adjacent channel stations, based on the 40 dB ratio, is confined to an area in the immediate vicinity of the interfering station, and the area decreases in size as the separation between short-spaced stations decreases. For example, class B stations having a third adjacent channel relationship are required by 73.207 to be separated by 74 kilometers. If the undesired station, "Station U", is located 59 kilometers from the desired station, the theoretical signal level from the desired station at Station U's site is approximately 57 dBu and theoretical interference occurs where Station U's signal is 40 dB higher than the desired signal, 97 dBu . The 97 dBu contour of the Station U is predicted to extend to a distance of 7 kilometers, therefore, the theoretical interference area encloses approximately 134 square

^{*} The interference area is assumed to be circular, a good approximation of the actual interference area.

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Page 4 Oceanside, California

kilometers. If Station U further reduces the separation to 44 kilometers, the desired signal at Station U's site is approximately 64 dBu and the signal required to cause interference is 104 dBu. The distance to the 104 dBu contour is 4.8 kilometers, resulting in an interference area enclosing 72 square kilometers. If the separation is reduced further to 30 kilometers, the theoretical interfering contour, 112 dBu, extends to 2.8 kilometers and the area of interference is approximately 25 square kilometers. Taken to the extreme, when second or third adjacent channel stations are collocated, no interference results.

While this situation might be viewed as counterintuitive that decreasing distance separation results in decreased interference among two station, this phenomenon is a well recognized occurrence. In point of fact, the phenomenon is actually not counterintuitive, when one considers that the interference ratio at the location of the edge of the desired station's protected signal contour consists of a relatively weak signal from the desired station being received in the presence of a substantially stronger potentially interfering signal. As the transmitter site of the station producing the undesired signal (Station U) is moved closer toward the transmitter site of the desired station, the desired